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(54) Abstract Title
Advertising label using thermochromic ink

(57) A label bearing advertising indicia defined or masked by a thermochromic ink is applied to a water contacting surface of a water receiving receptacle, such as a urinal, sink, shower or bath. The ink is selected such that upon contact with water having a temperature substantially different from ambient temperature (which may involve either an increase or decrease in temperature), the visibility of the indicia on the label changes. In one alternative, the thermochromic ink defining the advertising indicia may be colourless at ambient temperatures but develops colour on being cooled by the water. Alternatively, at ambient temperatures the advertising indicia may be masked by a layer of thermochromic ink, which on warming or cooling results in the masking layer changing colour so that the advertising indicia become visible. Also claimed is a water receiving receptacle bearing such an advertising label and a method of advertising using such a combination.

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ADVERTISING LABEL

This invention relates to an advertising label for attachment to a receptacle for receiving water such as a sink or urinal, and to receptacles bearing such advertising labels.

One of the problems facing any advertiser is to ensure that the advertisement is noticed. Many advertisements fail simply because they do not engage the attention of members of the public for a period long enough to take in details of the product or service being offered.

The present invention sets out to provide a means of focusing attention onto the advertisement and to provide an advertising medium in which it is difficult for a person to avoid seeing the advertisement.

The invention provides an advertising medium which can be displayed in situations where there is effectively a "captive audience".

More particularly, the invention is based upon the premise that when using public sanitary facilities such as public washrooms, showers, baths, urinals, baby changing facilities etc. a member of the public will have time to take in advertising messages presented to him or her. The impact of the advertising message is enhanced by providing an arrangement in which the advertising message materialises as the user is using the facility. Thus the natural curiosity of the user is exploited and hence his or her attention is focused on the advertising message.

The present invention achieves this objective by providing a label

bearing an advertising message, the label having applied to its surface a thermochromic ink which can change colour as water from a tap or shower, or other source contacts the label. The thermochromic ink thus changes colour gradually to reveal the advertising message.

Accordingly, in one aspect, the invention provides a receptacle for receiving water, a water-contacting surface of which has applied thereto a label bearing advertising indicia defined or masked by a thermochromic ink, the ink being selected such that upon contact with water having a temperature substantially different from ambient temperature, the visibility of the indicia on the label changes.

The indicia can be, for example, words, letters, geometric or other shapes, patterns, or any other form of marking, or any combination thereof.

The ink is usually chosen such that the indicia are normally substantially invisible and appear upon contact of the label with the water.

In one embodiment, the ink can be selected such that at ambient temperatures, it is substantially colourless, but develops colour when cooled, for example to a temperature 10 degrees or more below ambient temperature, more usually at least 15 degrees below ambient temperature. A label in accordance with this embodiment of the invention could be affixed, for example, beneath a cold water tap in a public utility such as a sink in a washroom, or even a fountain.

In another embodiment of the invention, the label bears a set of one or more advertising indicia defined by a first ink, and a masking layer defined by a thermochromic second ink, whereby upon exposure of the label to water, the masking layer changes colour or loses colour to reveal the advertising indicia defined by the first ink.

In the aforementioned embodiment, the first ink can be a non-thermochromic ink, although a thermochromic ink could be used if desired.

In addition to the first and second inks, a third and further inks may be employed and such inks can be thermochromic and selected so as to present indicia which appear or disappear at different temperatures. In this way, different advertising messages could be presented depending upon the temperature of the water contacting the label.

In one form, the thermochromic second ink can form a layer which completely overlaps with the advertising indicia, for example by overlaying the advertising indicia. In this embodiment, once a certain temperature is reached, the masking layer disappears to reveal the advertising indicia beneath.

As an alternative to overlaying the advertising indicia, the thermochromic second ink can be substantially the same colour as the first ink and can surround, but not overlap, the first ink, such that the indicia are revealed as the colour of the second ink changes or disappears when contacted with water.

Thus, the first and second inks can be of substantially the same colour at ambient temperatures. However, when the thermochromic ink acts as a masking layer overlaying the advertising indicia, it is preferred that the first ink is of a lighter colour than the thermochromic second ink so that the first ink does not show through the masking layer.

The masking layer may comprise a plurality of layers of different thermochromic inks, the individual thermochromic inks being selected so as to give a range of temperature sensitivities and ensure that the advertising indicia do not appear simply as a result of changes in ambient temperature, but only upon contact with water.

In addition to providing a receptacle having the advertising label attached thereto, the invention also provides a method of advertising comprising applying a label as hereinbefore defined to a receptacle for receiving water.

In a further aspect, the invention provides a label bearing advertising indicia defined or masked by a thermochromic ink as hereinbefore defined, the label being formed from a waterproof material and having an adhesive layer to enable it to be affixed to a receptacle for receiving water.

The label typically is formed from a waterproof material which may be constituted by or coated with a suitable waterproof polymeric material.

The adhesive used to affix the label to the receptacle is typically a waterproof adhesive, and preferably is a peelable adhesive enabling the label to be removed from the receptacle when required.

The invention will now be illustrated, but not limited, by reference to one specific embodiment. According to this embodiment, there is provided a generally circular label formed from a thin polyethylene film, or similar material. The reverse side of the film bears a peelable adhesive which remains tacky throughout its period of use. Prior to affixing the label to a receptacle, the adhesive layer is covered by a silicone coated release paper.

The label has thereon a logo (which may for example be a trade mark), for example a geometric shape together with a slogan, printed in a non-thermochromic ink. In this embodiment, the non-thermochromic ink is a light violet colour. Overlying the logo is a layer of a thermochromic ink which in this embodiment is a black ink. In the normal state, the blank thermochromic ink masks the underlying logo.

The label can be affixed to the surface of a urinal, or, for example,

under the hot or cold taps in a sink or bath or on the wall or surrounds of a shower. The precise thermochromic ink chosen will be selected such that its temperature range is consistent with the temperature of the water within which it is contacted. For example, if the label is to be affixed beneath a hot tap in a sink, the ink will be chosen such that, for example, it is at full colour up to about 32 to 40°C and then loses its colour at temperatures between about 41 and 50°C.

Conversely, if the label is to be affixed under the cold tap, instead of using a thermochromic ink as a masking agent, the thermochromic ink is used instead to define the outline shape of the logo. In this instance, the ink could be selected such that full colour is developed at lower temperatures, for example between 0 and 8°C, the temperature fading once the cold water tap is turned off, and hence the temperature rises again towards ambient temperature.

Suitable inks for use in accordance with the present invention are inks having the thermochromic properties shown in Table 1 below.

Thermochromic inks of the type listed in Table 1 and suitable for use in the present invention can be obtained from Luminescence Incorporated of Harlow, Essex, United Kingdom. Suitable thermochromic inks can also be obtained from Thermographics Company Limited, Chester, United Kingdom.

The advantage of the labels of the invention is that whilst the member of the public is using a urinal, or washing his or her hands, or similar activity, their attention can be captured by the sudden appearance on the surface of the water receptacle of an advertising message. As the message gradually develops, natural curiosity would, in most cases, serve to ensure that the user looks at the label long enough to see what emerges. In this way, the user's attention is concentrated on the advertising message.

Table 1

| Nominal Temperature | Temperature at which ink is at Full Colour (°C) | Temperature at which ink has No Colour (°C) |
|----------------------------|--|--|
| -25°C | -25 | -15 |
| -15° | -13 | 0 |
| -7°C | -4 | 5 |
| 5°C | 1 | 12 |
| 10°C | 8 | 16 |
| 15°C | 11 | 19 |
| 17°C | 14 | 23 |
| 20°C | 16 | 26 |
| 25°C | 22 | 31 |
| 27°C | 24 | 33 |
| 35°C | 27 | 36 |
| 37°C | 32 | 41 |
| 45°C | 40 | 50 |
| 47°C | 44 | 58 |

It will readily be apparent that numerous modifications and alterations can be made to the embodiment described about without departing from the principles underlying this invention, and all such modifications and alterations are intended to be embraced by this Application.

CLAIMS

1. A receptacle for receiving water, a water-contacting surface of which has applied thereto a label bearing advertising indicia defined or masked by a thermochromic ink, the ink being selected such that upon contact with water having a temperature substantially different from ambient temperature, the visibility of the indicia on the label changes.
2. A receptacle according to claim 1 wherein the ink is chosen such that the indicia are normally substantially invisible and appear upon contact of the label with the water.
3. A receptacle according to claim 1 or claim 2 which is selected from sinks, baths, urinals, and shower surrounds.
4. A receptacle according to any one of claims 1 to 3 wherein the ink is selected such that at ambient temperatures, it is substantially colourless, but develops colour when cooled, for example to a temperature 10 degrees or more below ambient temperature, more usually at least 15 degrees below ambient temperature.
5. A receptacle according to any one of the preceding claims wherein the label bears a set of one or more advertising indicia defined by a first ink, and a masking layer defined by a thermochromic second ink, whereby upon exposure of the label to water, the masking layer changes colour or loses colour to reveal the advertising indicia defined by the first ink.
6. A receptacle according to claim 5 wherein the first ink is a non-thermochromic ink.

7. A receptacle according to claim 5 or claim 6 wherein the thermochromic second ink forms a layer which overlaps with the advertising indicia.
8. A receptacle according to claim 7 wherein the thermochromic second ink forms a layer which completely overlays the advertising indicia.
9. A receptacle according to claim 5 or claim 6 wherein the thermochromic second ink is of substantially the same colour as the first ink and surrounds but does not overlap the first ink, whereby the indicia are revealed as the colour of the second ink changes or disappears when contacted with water.
10. A receptacle according to any one of claims 5 to 8 wherein the first and second inks are of substantially the same colour at ambient temperatures.
11. A receptacle according to any one of claims 5 to 8 wherein the first ink is of a lighter colour than the thermochromic second ink.
12. A method of advertising comprising applying a label as defined any one of the preceding claims to a receptacle for receiving water.
13. A label bearing advertising indicia defined or masked by a thermochromic ink as defined in any one of claims 1 to 11, the label being formed from a waterproof material and having an adhesive layer to enable it to be affixed to a receptacle for receiving water.
14. A receptacle bearing a label substantially as described herein with reference to the accompanying drawings.
15. A label substantially as described herein with reference to the

accompanying drawings.

16. A method of advertising substantially as described herein with reference to the accompanying drawings.



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Claims searched: All

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Patents Act 1977
Search Report under Section 17

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

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Other: Online: WPI

Documents considered to be relevant:

| Category | Identity of document and relevant passage | Relevant to claims |
|----------|---|--------------------|
| X | GB 2312955 A (WILLETT) see whole specification | 12,13 |
| X | GB 2310283 A (HICKEN) see whole specification | 13 |
| X | GB 2092744 A (SPIRIG) see whole specification | 12,13 |
| X | GB 384634 (FAU) see page 2 lines 36-49 in particular | 12,13 |
| A | US 4142782 (O'BRIAN) | |
| X | DE 3836424 A1 (MERZ) see whole specification, especially figure 1 | 12,13 |

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P Document published on or after the declared priority date but before the filing date of this invention.
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